

2013-14 SQUIRREL HUNTING COOPERATOR SURVEY REPORT



KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES

Prepared by:
Ben Robinson
Wildlife Biologist



Thank you to all the hunter cooperators who sent in hunting logs for the Fall Squirrel Hunting Cooperator Survey. Your efforts are appreciated, and we encourage you to continue sending in your hunting logs. Encourage your hunting buddies to do the same! Survey participation has been decreasing over the past few years so be sure to recruit your friends. The following report will cover the results of last season's (2013-14) Fall Squirrel Hunting Cooperator Survey and the 2013 Mast Survey. Last season's harvest and hunting effort totals are included as well as the current population trends, along with an outlook for the upcoming season.

I. 2013-14 Fall Squirrel Hunter Cooperator Survey

The squirrel survey was developed in 1995 as a voluntary initiative. Hunters are asked to record data including date of hunt, county hunted, hours hunted, number of hunters, number of dogs, and number of fox & gray squirrels (seen, killed, and wounded), on a diary-type hunting log. Logs are available on the internet: <http://fw.ky.gov/Hunt/Pages/Game-Species.aspx> or by calling **1-800-858-1549**. Hunters simply keep the log up-to-date as the hunting season progresses, and mail it to Kentucky Department of Fish and Wildlife (KDFWR) Headquarters when they're finished hunting for the season. Data collected from the survey gives the KDFWR information that can be used to monitor squirrel population trends in Kentucky and better serve the hunters of the state. Each year participating hunter cooperators are mailed a new hunting log, the results of the survey, and a small gift. Hunters who wish to receive a copy of their log from the previous year may call 800-858-1549 ext. 4545 or e-mail ben.robinson@ky.gov.

Summary of Last Year's Hunter Logs

Participation has been decreasing over the last several years. Once again, don't forget to mail in your log and encourage other squirrel hunters to do the same. Why not take someone new hunting this year? The future of hunting depends on it.

2013-14 Overview:

- Logs were received from 81 hunters.
- Hunters averaged 13.2 hunting trips throughout the season.
- 5.6% of hunts included the use of dogs.
- Average hunt lasted 2.9 hours.
- Data was provided from 1,077 hunts.
- Data was provided from 72 counties across Kentucky.
- Central Region = 572 hunts East Region = 261 hunts West Region = 244 hunts (see *Appendix A for regional map*)
- Hunters saw an average of 5.9 squirrels per **hunt**.
- Hunters saw an average of 2.0 squirrels per **hour**.

The number of squirrels seen and killed by hunters decreased as the season progressed (Figure 1).

- Hunters saw an average of 4.9 gray squirrels per hunt and 0.9 fox squirrels per hunt.
- Hunters saw an average of 1.7 gray squirrels per hour and 0.3 fox squirrels per hour.

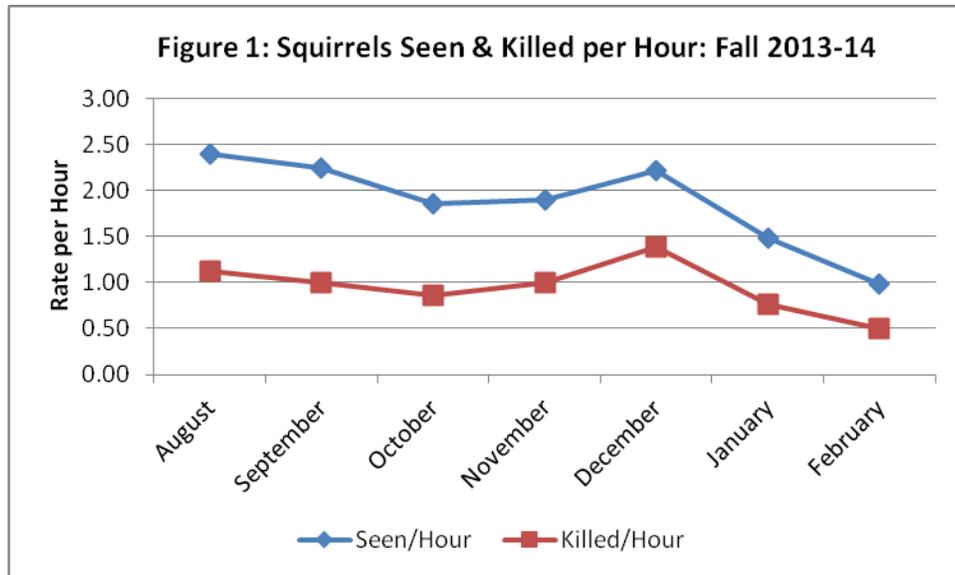


Figure 2 shows the long-term trend for the number of gray and fox squirrels seen per hour.

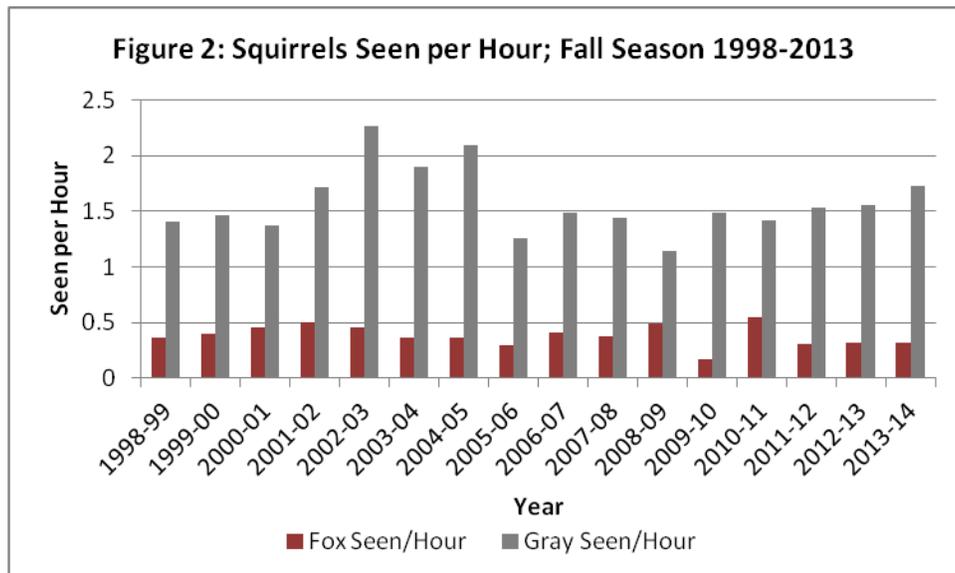


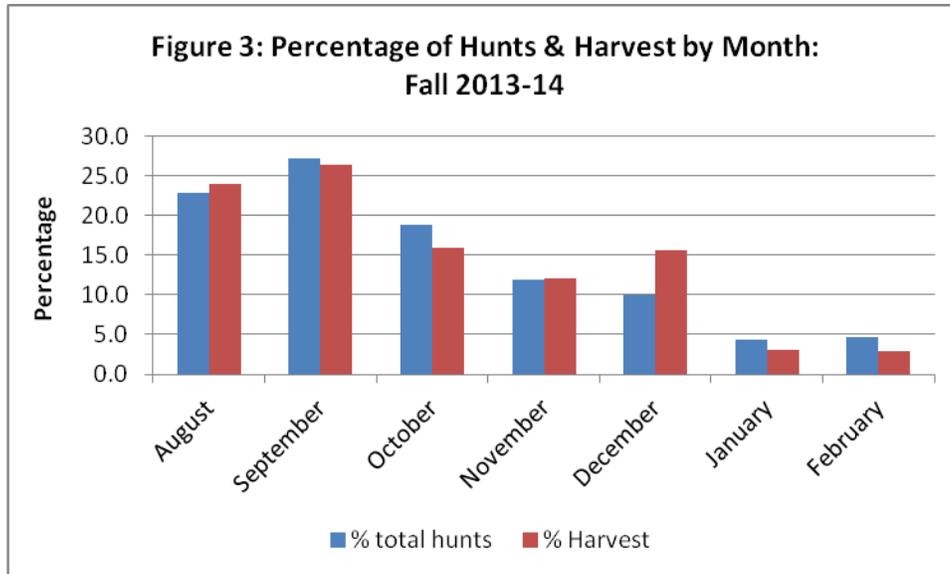
Table 2. Summary of Fall Squirrel Hunter Cooperator Survey data; 2007-2013 squirrel season.

| STATISTICS | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total cooperators | 129 | 117 | 109 | 97 | 85 | 83 | 81 |
| Total hunts | 1498 | 1320 | 1319 | 1134 | 1144 | 1123 | 1077 |
| Total counties | 100 | 88 | 91 | 82 | 76 | 69 | 72 |
| Average hunts/cooperator | 11.6 | 11.3 | 12.1 | 11.6 | 13.3 | 13.5 | 13.2 |
| Total hours | 4097 | 3566 | 3499 | 2946 | 3063 | 3319 | 3097 |
| Hunts using dogs (%) | 14.0 | 13.0 | 11.0 | 7.0 | 7.5 | 7.2 | 5.6 |
| Total fox squirrels seen | 1508 | 1764 | 1254 | 1625 | 947 | 1053 | 1005 |
| Total fox squirrels killed | 683 | 726 | 653 | 818 | 487 | 550 | 533 |
| Total fox squirrels wounded | 50 | 52 | 66 | 52 | 40 | 39 | 35 |
| Total gray squirrels seen | 5901 | 4076 | 5321 | 4184 | 4684 | 5145 | 5342 |
| Total gray squirrels killed | 2712 | 1822 | 2744 | 1895 | 2315 | 2389 | 2561 |
| Total gray squirrels wounded | 224 | 132 | 206 | 153 | 177 | 227 | 185 |
| Harvest of squirrels seen (%) | 45.8 | 43.6 | 50.8 | 46.7 | 49.7 | 47.4 | 48.7 |
| Squirrels wounded (%) | 3.7 | 3.2 | 4.0 | 3.5 | 3.8 | 4.3 | 3.4 |
| Hunting mortality (%) | 49.5 | 46.7 | 54.8 | 50.2 | 53.6 | 51.7 | 52.2 |

Hunter Effort

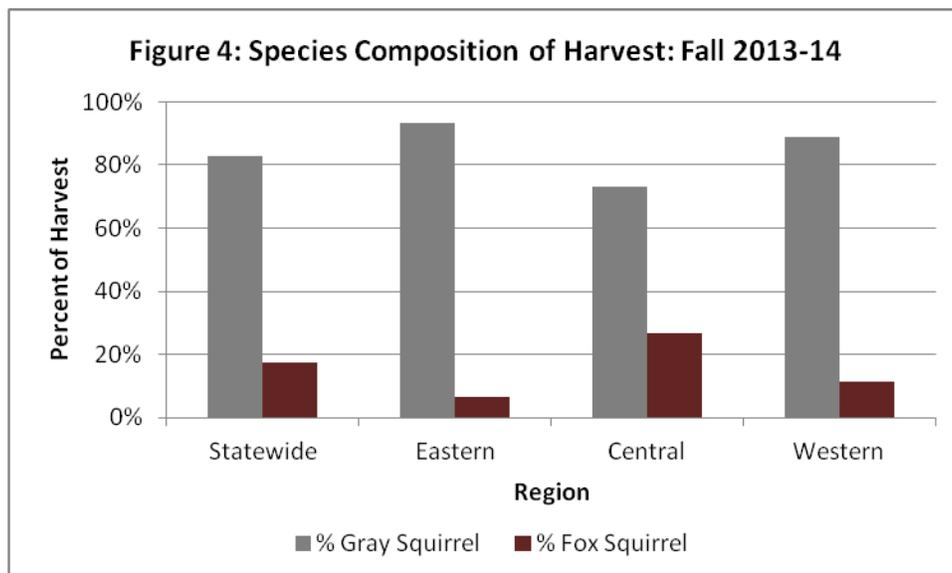
Hunting effort was greater towards the beginning of squirrel season. Sixty-nine percent of the hunts took place in August, September, and October (Figure 3).

The hunter effort index declined as the season progressed, and squirrel-hunting trips were rare in January and February. Squirrel hunting is one of a few seasons open in August and September, and later season opening dates for deer, waterfowl, rabbit, grouse, and quail may account for the greater hunting effort taking place towards the beginning of squirrel season. The percentage of hunts dropped beginning in November, with only 12% of the total hunts occurring in this month. The drop in hunting rate was likely a direct result of the onset of deer gun season. Historical Hunter Cooperator data shows a similar trend.



Harvest

- Hunters harvested 48.7% of squirrels seen and wounded 3.4%. Assuming wounded squirrels did not survive, the hunting mortality rate was 52.2% of squirrels seen in 2013-14.
- Statewide, 83% of the harvest was comprised of gray squirrels (Figure 4). The rate suggests Kentucky squirrel hunters prefer hunting in more extensive forests and woodlands, common to gray squirrels, than small woodlots and fencerow-type habitats where fox squirrels are often found. It also implies that gray squirrels are more abundant than fox squirrels.



II. 2013 Mast Survey Results

A statewide mast production survey of Kentucky's most important producers of wildlife foods was initiated in 1953 and has been conducted annually thereafter. A close relationship has been found between a given year's mast production and the following year's squirrel population level statewide. The mast survey looks at the 3 primary mast producing tree groups (hickories, red oaks, and white oaks) with American beech being the only individual species surveyed.

Summary of the Survey

The chart (mast results) shows the proportion of trees bearing acorns (PBA) or other mast across Kentucky. As an example, 23.0% listed in the white oak row means that for every white oak tree surveyed in Kentucky in 2013, an average of 23% of those trees contained acorns. Categorically, this was considered a "poor" white oak mast crop. Statewide, mast production in 2013 was average or above average for red oak trees, hickories, and beech.

Statewide

Mast Results:

| | Failure 0-19% | Poor 20-39% | Average 40-59% | Good 60-79% | Bumper 80-100% |
|------------------|-------------------------|-----------------------|--------------------------|-----------------------|--------------------------|
| White Oak | | 23.0 | | | |
| Red Oak | | | 40.2 | | |
| Hickory | | | 57.3 | | |
| Beech | | | 49.4 | | |

III. 2014-15 Fall Squirrel Hunt Forecast

The 2013 mast crop was rated "average-above average" for red oak, hickory, and beech. This meant that Kentucky's forests did have quite a bit of mast present. Last year hunters saw an average of 2.0 squirrels per hour. Hunters should expect to see an average of 2 squirrels per hour once again this season.

Don't forget to turn in your Hunter Cooperator log at the completion of this year's hunt. **Logs should be returned no later than May 31, 2015.** In return we'll send you a report and a small gift as a token of our appreciation.

Encourage all of your friends to log their hunts as well. Have a safe and enjoyable squirrel season and thanks again for your support! And don't forget to take someone new to hunting out with you this year.

